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Medical School
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Public Health Aspects of Gonorrhea[*]

By H. M. ELLIOTT, M. D., Director, Venereal Disease Division, City Health Department, Los Angeles.

Historical.

Gonorrhea is the greatest problem in infectious diseases with which the world has to contend.

Before the advent of syphilis, gonorrhea was held to be a separate and distinct entity, but in the fifteenth century syphilis appeared in Europe and spread widely and rapidly as an epidemic. This new venereal disease excited so much attention that the study of gonorrhea fell into abeyance, and soon all the venereal diseases became confused together and were regarded as different manifestations of one and the same disease. This period lasted for several hundred years. In 1831 Ricord made 667 inoculations and showed conclusively that gonorrhea and syphilis were two separate and distinct diseases. It was not until Albert Neisser in 1879 discovered and described the gonococcus, that this organism was accepted as the cause of gonorrhea.

Prevalence.

Gonorrhea is not only the most common venereal disease, but is one of the most widespread of all infectious diseases. It is estimated that there are 700,000 new infections yearly in the United States. It is quite out of the question to determine just how frequent it is. So many cases escape detection that the usual sources of information as to morbidity are thoroughly unreliable. Any serious estimate we can make from available statistics is an underestimate. Morrow has estimated that 75% of all male adults at some time or another acquire gonorrhea. The rate of incidence in the larger cities is larger than in the rural communities, Noggerath estimating that 810 out of every 1000 males in New York have or have had gonorrhea.

Present Status of Treatment.

Gonorrhea is the one common disease of long known etiology in which there is a general lack of uniformity of treatment. One hesitates even to discuss the treatment of a condition in which the number of "cures" is legion, but which is said to cure itself if left alone.

Advances in the therapy of gonorrhea have not been made proportionate to the progress noted in handling surgical lesions of the urogenital tract. A frank interchange of opinions by those with extensive clinical experience will clear up the present hazy conceptions.

The ordeal of the World War and the necessity of raising an army as physiologically fit as possible, may be said to mark the date of activity by public health officials in the prevention and treatment of this disease. Up to that time very little intelligent effort had been made in that direction in this country, and discussion of them outside medical circles was taboo.

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[*] Read before Health Officers' Section League of California Municipalities, San Francisco, September 23, 1935.

For generations gonorrheal urethritis has been treated mainly by irrigations, or injections into the urethra of various chemical solutions that were thought to have an antiseptic or germicidal effect. The gamut of the so-called urethral germicides has been run from those old standbys potassium permanganate and the nonirritating silver protein salts to another group of miracle workers—the analine dyes. Each group and each substance has had its more or less vociferous protagonists. Keyes points out that immunological measures are different for plant and animal parasites. The gonococcus—a plant parasite is unfavorable for immunological treatment—while syphilis, an animal parasite, is favorable for immunological treatment. While serology has advanced the treatment of syphilis—it has only shown its ineffectiveness in gonorrhea.

Because the present methods of treating gonorrhea are still largely those of a decade ago, and comparatively few new drugs and treatments have been added to the therapeutic armamentarium; because the value of vaccines is still questionable, and the status of diathermy is not yet established, it becomes evident that our efforts as public health guardians must be directed and concentrated on prevention and control through public health educational and prophylactic measures.

Koch succeeded in isolating and cultivating the tubercle bacillus in 1882. No specific serum or vaccine has been discovered which would vaccinate, protect actively or passively against the disease; yet, the most dramatic drop in the morbidity and mortality of tuberculosis has been effected by an active propaganda to educate the doctor and community relative to the causation, prevention, early detection and treatment of the disease. Since 1907, when the campaign against tuberculosis was organized, the disease has been reduced by nearly four-fifths.

The success of preventive medicine in eradicating any contagious disease depends ultimately on the public support which it is able to command. This is especially true in the case of venereal diseases. The greatest single factor responsible for the failure in the fight against venereal disease is due to the public ignorance and fear of free discussion. The risk of arousing sexual instincts in the young by publicising the subject of venereal diseases is negligible compared with certain dangers of ignorance, infection, contagion and complication. Therefore, the first and fundamental need in the fight against venereal disease is PUBLIC EDUCATION.

Paradoxically, it is not alone the public that is sadly in need of enlightenment. The medical schools have failed to give the subject of gonorrhea the academic recognition it deserves as a widespread contagious disease with the gravest of complications and sequelae.

It is estimated that 60 per cent of physicians who treat gonorrhea, only 2 per cent have had special training. Many treat without the use of the microscope, either for diagnosis or control.

Hospitals and dispensary facilities for treatment of venereal diseases in general are woefully inadequate. Hospital wards for venereal patients are practically nonexistent. University hospitals should take the lead in the discovery and study and adoption of new methods, and for this purpose hospital beds should be made available for venereal patients.

The epidemiological means of study and control applied to other communicable diseases must be instituted in this disease. The source of infection, the mode of transmission—must be exposed, regulated and controlled. The main source from which venereal diseases proceeds is prostitution. Preventive medicine must consider the methods of controlling this avenue of infection. There is a direct ratio between the amount of prostitution and the amount of venereal disease in any community.

The enforcement of such laws as are now on the statute books is entirely unsatisfactory. In the larger cities examinations are fairly constantly made, and diseased prostitutes treated until no longer infectious. In the smaller towns and villages, their places of hideout are raided on complaint, the inmates brought before a justice of the peace, occasionally fined, but nearly always discharged with the warning to leave town, which they usually do, only to open shop in the adjoining town.

No plea is being made to mete out severer punishments to the prostitutes—they should be treated as patients infected with a highly contagious disease—a menace to public health, and should be isolated, adequately treated, before being released.

On the other hand, those who are making a living from white slavery should receive the full penalty of the law, which should be made more severe than is now prescribed. As it is, those who are engaged in this traffic are plying their trade almost without hindrance.

(Continued in next issue)

No enterprise in the range of human experience can rank with learning. By it alone man rises above dumb creatures. If, therefore, we have received nothing else so good as the mind, what should be more worth cultivating? No quest of gold or worldly power has in the long run ever brought like gratification. No other adventure is to be compared with it. Through it civilization and all man's higher achievements have been won.—Leon J. Richardson.

SOME COMMENTS ON THE MUNICIPAL REFUSE PROBLEM

(Continued from last issue.)

The Disposal of Refuse.

The several classes of refuse may be disposed of either independently or mixed together, in satisfactory and sanitary fashion, in various ways. The determination of the best method or methods of disposal is a complicated engineering problem. It must be solved with a full understanding of local conditions and of the economic, esthetic and public health implications involved.

Mixed refuse may be properly disposed of, according to the controlling conditions, by high-temperature burning or incineration, by sanitary fill, and by dumping at sea.

As a fundamental thesis it may be stated that the destruction of matter by fire produces a final product, ashes, which is absolutely innocuous. In that respect the refuse incinerator is the ideal means of disposal of municipal refuse. However, very high temperatures must be maintained to prevent serious nuisance due to odors. These high temperatures cause heavy depreciation and maintenance charges. The investment cost of suitable incinerator plants is also high, both in absolute and relative terms. The operating costs, moreover, are high if consistently good and dependable results are demanded. Incinerators are apt to be dusty and dirty. Experience has shown that they are frequently overloaded with resulting unsatisfactory performance. Unburned or partially burned refuse must be dumped causing odor nuisance and fly and rat menace unless sanitary fill methods therefor are utilized. These several factors have combined to eliminate the incinerator in most small communities, and in many large cities, despite high-pressure salesmanship the like of which it would be difficult to discover with respect to any other commodity, not excluding vacuum cleaners and a well-known type of brush.

Where land suitable as to location and type is available within a reasonable transportation distance and where the process is properly conducted, the disposal of refuse by sanitary fill has proven to be very satisfactory with respect both to sanitation and cost. Unfortunately most operations of land filling are not to be classed as "sanitary fills" but rather are to be described by the short and ugly word, "dumps."

The success of the sanitary fill method of refuse disposal depends very largely upon having a supply of suitable earth or similar material on hand to completely cover each day's deposit of refuse to a depth of several inches, say, not less than six and preferably more. Wet garbage and vegetable matter, unless thoroughly incorporated with the rubbish, should be deposited where it can first be covered with the drier elements of the refuse. The fill should never be allowed to burn and fires, if started, should be extinguished at once. Rodents must be exterminated, if they appear, by poisoning and trapping. A notable example of nearly ideal refuse disposal by the sanitary fill method is that of the city of San Francisco at Bay Shore, conducted by the Sanitary Fill Company, formerly the Scavengers' Protective Union. This will be described to you by Mr. A. B. Crowley, Chief, Industrial Division, San Francisco Department of Public Health, and will be demonstrated by an inspection trip. Another notable example is the sanitary fill of the city of Berkeley. In both cases the disposal is being effected with a preservation of the sanitary and esthetic values and at a cost which is but a fraction of that which incineration would demand.

The city of Oakland presents a unique example of the proper and satisfactory disposal of mixed refuse by dumping at sea. The procedure will be briefly described by Mr. Crowley.

The disposal of garbage, proper, by feeding to hogs is best illustrated by communities in Los Angeles County, including the city of Los Angeles. One report states that no other method is employed by the 44 municipalities in that county.

The garbage collected daily in the city of Los Angeles amounts to from 400 to 600 tons. It is fed to some 45,000 hogs within a fenced area of 220 acres on the Fontana Ranch in San Bernardino County.

Other methods of disposal of refuse and garbage are available but they are not of sufficient importance to warrant discussion in this very brief paper.

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"Municipal Refuse Problems and Procedures"—A Survey of Methods of Collection and Disposal in 53 Pacific Coast Cities, by C. G. Gillespie and E. A. Reinke, Bureau of Sanitary Engineering, California State Department of Public Health, Berkeley, California. Civil Engineering, Vol. 4, No. 9, September, 1934, pp. 487–491.

"A Survey of Municipal Garbage Disposal," by Dr. L. F. Conti, The Los Angeles County Live Stock Department, Union Stock Yards, Los Angeles, California.

Municipal Index, 1931, Section 11, pp. 617–652.

To live in the temper and spirit of a learner, open-minded, unwarped in judgment, free as far as light permits from delusions, eager to explore and inquire, quick to give up a confuted idea and so gain a higher outlook, striving steadily to improve and to grow—these are watchwords of a person who is striving to advance his intellectual life.—Leon J. Richardson.

MORBIDITY

Complete Reports for Following Diseases for Week Ending November 23, 1935

Chickenpox

450 cases: Alameda County 5, Alameda 1, Berkeley 29, Oakland 26, Butte County 1, Gridley 5, Colusa County 1, Colusa 1, Contra Costa County 7, Martinez 1, Pinole 5, Richmond 1, Walnut Creek 19, Del Norte County 6, Fresno County 5, Fresno 16, Kern County 5, Lassen County 2, Los Angeles County 18, Alhambra 2, Beverly Hills 1, Glendale 27, Huntington Park 1, Long Beach 1, Los Angeles 64, Monrovia 1, Montebello 6, Pasadena 1, Pomona 5, San Gabriel 2, Santa Monica 7, Whittier 3, Maywood 3, Orange County 2, Fullerton 1, Orange 2, Santa Ana 22, Placentia 1, Riverside County 1, Beaumont 2, Sacramento County 1, Sacramento 12, Hollister 1, San Bernardino County 2, Ontario 1, San Bernardino 1, San Diego County 12, Escondido 1, San Diego 15, San Francisco 15, San Joaquin County 5, Stockton 8, San Luis Obispo County 11, San Luis Obispo 5, San Mateo County 1, Daly City 1, San Bruno 3, Santa Barbara 2, Santa Maria 2, Santa Clara County 2, San Jose 2, Santa Cruz County 1, Riverbank 19, Sutter County 2, Ventura County 8, Oxnard 1, Santa Paula 1, Yolo County 6.

Diphtheria

64 cases: Oakland 8, Butte County 1, Fresno County 1, Los Angeles County 4, Burbank 1, Los Angeles 13, Bell 1, Monterey County 1, Soledad 4, Orange County 1, Riverside County 3, Riverside 2, Sacramento 1, Colton 9, San Bernardino 3, San Diego 1, San Francisco 2, Santa Barbara 2, San Jose 3, Watsonville 1, Porterville 1, Ventura County 1.

German Measles

80 cases: Alameda 1, Berkeley 1, Oakland 4, San Leandro 1, Contra Costa County 7, Walnut Creek 1, Kern County 1, Los Angeles County 5, Burbank 1, Glendora 1, Long Beach 3, Los Angeles 4, Manhattan 1, Hawthorne 1, Orange 1, Tustin 2, Riverside County 1, Riverside 2, Sacramento 3, Ontario 1, San Francisco 34, Palo Alto 2, Oakdale 1, Woodland 1.

Influenze

46 cases: Berkeley 1, Lassen County 2, Los Angeles County 5, Los Angeles 26, Merced County 1, Santa Ana 1, Riverside County 1, San Diego 1, San Francisco 6, Stanislaus County 1, Turlock 1.

Malaria

3 cases: Kern County 1, Los Angeles 1, Pasadena 1.

Measles

209 cases: Alameda County 8, Alameda 1, Berkeley 3, Oakland 8, Piedmont 3, Chico 1, Contra Costa County 2, Martinez 1, Fresno County 1, Fresno 15, Los Angeles County 4, Los Angeles 31, Manhattan 8, Pomona 1, Redondo 1, Madera County 1, Alturas 4, Monterey County 1, Monterey 29, Salinas 4, Soledad 2, Nevada County 1, Riverside County 1, Riverside 4, Sacramento 1, San Bernardino County 1, San Diego County 2, National City 1, San Diego 3, San Francisco 25, Stockton 1, San Luis Obispo 3, Burlingame 1, Santa Barbara County 3, Lompoc 1, Mountain View 1, San Jose 1, Willow Glen 1, Santa Cruz County 1, Porterville 1, Ventura County 15, Yolo County 2, Woodland 10.

Mumps

294 cases: Berkeley 6, Oakland 35, Piedmont 1, San Leandro 1, Chico 5, Contra Costa County 1, Richmond 1, Fresno County 5, Fresno 10, Eureka 3, Calexico 2, Kern County 20, Taft 2, Lassen County 3, Los Angeles County 7, Claremont 5, Culver City 1, Long Beach 19, Los Angeles 31, Pomona 19, Sierra Madre 7, South Gate 1, Madera County 2, Salinas 4, Orange County 1, Santa Ana 2, Corona 26, Riverside 11, Sacramento 24, Ontario 1, San Diego County 3, Escondido 3, San Diego 2, San Francisco 8, San Joaquin County 6, Stockton 4, San Luis Obispo County 2, San Luis Obispo 1, Santa Barbara 1, Santa Clara County 2, Watsonville 1, Siskiyou County 2, Tulare County 1, Yolo County 2.

Pneumonia (Lobar)

68 cases: Berkeley 2, Oakland 4, Antioch 1, Kern County 1, Bakersfield 1, Los Angeles County 4, Huntington Park 3, Inglewood 3, Los Angeles 24, Pasadena 1, Fullerton 1, Riverside County 1, Sacramento 3, San Bernardino County 1, San Bernardino 1, San Diego 1, San Francisco 10, Daly City 1, Palo Alto 1, San Jose 2, Fillmore 1, Oxnard 1.

Scarlet Fever

250 cases: Alameda 1, Berkeley 6, Oakland 13, Piedmont 1, Butte County 1, Chico 1, Richmond 5, El Dorado County 1, Fresno County 1, Fresno 2, Humboldt County 1, Eureka 1, Bishop 3, Kern County 5, Los Angeles County 30, Alhambra 9, Burbank 1, Glendale 4, Huntington Park 3, Long Beach 4, Los Angeles 49, Montebello 4, Pasadena 3, Pomona 1, San Gabriel 1, Lynwood 2, South Gate 1, Monterey Park 1, Nevada City 1, Orange County 2, Anaheim 3, Orange 3, La Habra 2, Laguna Beach 3, Riverside County 1, Riverside 1, Sacramento County 1, Sacramento 19, San Bernardino County 3, Ontario 2, San Bernardino 5, San Diego County 3, La Mesa 1, San Diego 6, San Francisco 16, San Joaquin County 1, Lodi 1, Stockton 1, Tracy 1, San Mateo County 1, Redwood City 1, San Mateo 1, Santa Clara County 2, Santa Cruz County 1, Solano County 1, Vallejo 1, Stanislaus County 3, Tulare County 3, Ventura County 2, Fillmore 1, Davis 1, California 1.*

Smallpox

7 cases: Monterey County 5, Pacific Grove 1, California 1.*

Typhoid Fever

8 cases: Fresno 2, Kern County 2, Lake County 1, Tracy 2, Solano County 1.

Whooping Cough

141 cases: Alameda 6, Berkeley 4, Oakland 12, Richmond 1, Humboldt County 1, Lassen County 2, Los Angeles County 15, Culver City 1, Glendale 1, Long Beach 10, Los Angeles 21, Maywood 3, Monterey 3, Soledad 3, Sacramento 1, San Bernardino County 1, San Diego 9, San Francisco 27, San Joaquin County 5, Stockton 4, Tracy 1, Santa Cruz County 5, Watsonville 1, Ventura County 3, Oxnard 1.

Meningitis (Epidemic)

5 cases: El Dorado County 1, Kern County 1, Riverside County 1, San Diego County 1, San Francisco 1.

Dysentery (Amoebic)

One case: San Francisco.

Pellagra

2 cases: Kern County.

Poliomyelitis

17 cases: Fresno 1, Kern County 1, Lake County 1, Glendale 1, Los Angeles 5, Monterey County 1, Monterey 2, Riverside County 1, San Francisco 1, Siskiyou County 2, Tulare County 1.

Tetanus

One case: Los Angeles.

Trachoma

4 cases: Santa Barbara 3, Santa Clara County 1.

Encephalitis (Epidemic)

One case: San Francisco.

Jaundice (Epidemic)

One case: Kern County.

Septic Sore Throat (Epidemic)

One case: Lake County.

Rabies (Animal)

5 cases: Calexico 1, Glendale 1, Long Beach 1, Los Angeles 1, San Diego 1.

* Cases charged to "California" represent patients ill before entering the state or those who contracted their illness traveling about the state throughout the incubation period of the disease. These cases are not chargeable to any one locality.

The will keeps our feet on an ascending trail. Knowledge meanwhile accumulates facts. Understanding correlates them. Wisdom simplifies them. Truth is told at last in monosyllables.

The word scholar is derived from a root meaning "leisure." One to whom that name belongs works best in quietude. Deliberation, abhorring pressure and speed, can go only at its own pace. Haste is passed at the goal by the crutch of time.—Leon J. Richardson.

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